

DUPPLICATE CLAIMS  
DO NOT PRINT

1. (Three times amended) A cDNA sequence which encodes for a murine protein 4-1BB, said murine protein comprising SEQ ID NO:2.
22. (Twice amended) A purified and isolated DNA molecule comprising a nucleic acid selected from the group consisting of:
  - a) a nucleic acid sequence encoding SEQ ID NO:2,
  - b) a nucleic acid sequence consisting of positions 661-855 of SEQ ID NO:1,
  - c) a nucleic acid sequence consisting of positions 1284-1557 of SEQ ID NO:1, and
  - d) the complement of (a), (b), or (c) [which encodes the amino acid sequence shown in figures 2a and 2b, or a fragment of the DNA that specifically hybridizes to the DNA sequence in Figure 2 or the complement thereof].

### Remarks

Reconsideration and withdrawal of the rejections of the claims, in view of the amendments and remarks presented herein, is respectfully requested. Claims 1 and 22 are amended, and claims 6-21 and 23-27 are canceled. Claims 1-3, 22 and 28-30 are pending.

The specification is amended to correct typographical errors. No new matter has been added by the amendments.

Claims 6-21 and 23-27 are canceled solely in response to the restriction requirement and without prejudice to their presentation in an appropriately-filed divisional application.

Amended claim 1 is supported by Figure 2 of the specification.

Amended claim 22 is supported by the specification at page 17, lines 12-31.

A SEQUENCE LISTING, to conform the above-referenced application to the requirements of 37 C.F.R. §§ 1.821 through 1.825, is submitted herewith.

In accordance with 37 C.F.R. § 1.821(e), a copy of the above-submitted SEQUENCE LISTING in ASCII computer readable form is also submitted herewith. It is respectfully submitted that the contents of the paper version of the SEQUENCE LISTING and the computer readable form being submitted herewith are the same. It is further submitted that the paper copy

of the SEQUENCE LISTING and the computer readable form of the SEQUENCE LISTING do not represent new matter.

Claims 1 and 22 were rejected under 35 U.S.C. § 112, first paragraph. The amendments to claims 1 and 22 moot this rejection.

Claims 28-30 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

In particular, the Examiner asserts that the specification does not put forth which amino acids of the polypeptide sequence shown in Figure 2 constitute the extracellular domain or result in a soluble protein. However, the specification discloses that murine 4-1BB has a 22 amino acid signal peptide (see page 17, line 17), a 26 amino acid hydrophobic region (membrane anchor) at positions 182-211 followed by a 45 residue hydrophilic region (page 18, lines 12-14 and 23-26). Figure 2 provides the sequence of a 256 amino acid polypeptide, the first 22 residues of which are a signal peptide. At page 31, lines 11-14, the specification describes the preparation of a vector which encodes 4-1BB which lacks the membrane anchor (residues 182-211) and the cytoplasmic domain (residues 212-256). The expression of that vector in COS cells is disclosed as yielding “soluble 4-1BB” (page 31, line 20). In view of this description, the art worker in possession of Applicant’s specification would readily understand the metes and bounds of the phrases “extracellular domain of murine 4-1BB” and “soluble 4-1BB”.

In the Advisory Action mailed February 27, 2001, the Examiner stated that the Amendment filed on February 6, 2001 did not place the application in condition for allowance. The amendments to claims 1 and 22 moot this rejection.

It is respectfully submitted that the pending claims are in conformance with 35 U.S.C. § 112. Thus, withdrawal of the rejections of the claims under 35 U.S.C. § 112 is respectfully requested.

**Conclusion**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612-373-6959) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

BYOUNG S. KWON

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
P.O. Box 2938  
Minneapolis, MN 55402  
(612) 373-6959

Date July 13, 2001

By Janet E. Embretson

Janet E. Embretson

Reg. No. 39,665

"Express Mail" mailing label number: EL671641715US

Date of Deposit: July 13, 2001

This paper or fee is being deposited on the date indicated above with the United States Postal Service pursuant to 37 CFR 1.10, and is addressed to Box CPA, Commissioner for Patents, Washington, D. C. 20231.